



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,149	02/27/2004	David Abusch-Magder	29250-002010/US	4613

7590 03/27/2006

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 8910
Reston, VA 20195

EXAMINER

GELIN, JEAN ALLAND

ART UNIT PAPER NUMBER

2617

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,149

Applicant(s)

ABUSCH-MAGDER ET AL.

Examiner

Jean A. Gelin

Art Unit

2688

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-25 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 26-33 is/are rejected.
- 7) ☒ Claim(s) 7-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is in response to the Applicant's argument filed on January 18, 2006 in which claims 1-33 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Cambray-Mathan (US 2003/0190917) in view of Crisler (US 5,179,559) further in view of Subramanian et al. (US 5,907,810).

Regarding claims 1, 26, 29, and 31, De Cambray-Mathan teaches a method of determining cells for deletion in a network design (i.e., evaluate cell for deletion, sections 57-58, 78), comprising: simulating operation of the network to generate statistics for each cell of a given group of cells (sections 59, 76, and 79); evaluating statistics of each cell based on a given ranking criteria (i.e., user can select a region to be evaluated and that region can be a new cell, section 57-59 and 76-79).

De Cambray-Mathan does not specifically teach ordering cells of the group by rank based on the evaluation.

However, ordering cells of the group by rank based on the evaluation is known in the art of communications. Crisler teaches cells are listed in a ranked order based on

Art Unit: 2688

the received signal quality to arrange the cell having the best quality on top of the list (col. 6, lines 2-65). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Crisler within the system of De Cambray-Mathan in order that an available cell site which provides the best received signal quality is selected by the communication unit for handoff.

De Cambray-Mathan in view of Crisler does not specifically teach deleting the highest ranked cell.

However, the preceding limitation is known in the art of communications. Subramanian teaches cell C receives the highest paging traffic in the network, the zone which includes cell C is identified, the paging traffic is recalculated assuming cell C is being removed one zone at a time (i.e., the cell with the largest load is removed, col. 5, lines 4-27 and col. 6, lines 24-34). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the technique of Subramanian within the system of De Cambray-Mathan in view of Crisler in order to provide a method for reducing the paging load in cellular communication by removing the cell receiving highest paging from a zone.

Regarding claims 2, 30, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. De Cambray-Mathan teaches wherein only a single simulation of the network is performed to determine cells for deletion (sections 57-59).

Regarding claims 3, 28, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. Subramanian teaches wherein said

simulating, evaluating, ordering and deleting are repeated until a desired number of N cells are deleted (col. 5, line 57 to col. 6, line 34).

Regarding claim 4, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. De Cambray-Mathan teaches wherein the network design is applicable to determining site selection of cells for an initial network deployment (sections 57-59).

Regarding claims 5, 32, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. De Cambray-Mathan teaches wherein the network design is applicable to determining cells for deletion as part of a network overlay or upgrade of an existing network (section 93).

Regarding claim 6, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. De Cambray-Mathan teaches wherein said generated statistics include statistics related to at least one of a number of soft handoff legs for each cell of the group, total active legs for each cell of the group, and total number of simplex and softer-handoff legs for each cell of the group (sections 63 and 81).

Regarding claim 27, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. Subramanian teaches collecting revised network statistics for each cell after deletion of the highest ranked cell from the network (information is stored prior to recalculate, col. 6, lines 24-40), and determining the influence that the deleted highest ranked cell has on the network based on the collected statistics (col. 6, lines 24-40).

Regarding claim 33, De Cambray-Mathan in view of Crisler further in view of Subramanian teaches all the limitations above. Subramanian teaches wherein the effects of inhomogeneity that are accounted for include non-uniform traffic distribution within the proposed network (col. 5, lines 4-26).

Allowable Subject Matter

4. Claims 19-25 are allowed.
5. Claims 7-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Response to Arguments

6. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant argues that De Cambray-Mathan fails to teach ordering cells of the group by rank. The Examiner agrees with the preceding argument, but a prior art has been used to reject the preceding limitation (see rejection above).

The Applicant further argues that De Cambray-Mathan in view of Subramanian fail to teach deleting the highest ranked cell. However, the Examiner disagrees with the preceding arguments. Subramanian teaches removing the cell having the highest load in the group (typically cells are evaluated to select the one having the highest load).

Art Unit: 2688

Therefore, the preceding limitation is read on Subramanian as recited in the rejection above.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lindquist et al.	US 7,013,141	03/14/2006
Hogan	US 6,442,393	08/27/2002
Kim et al.	US 2005/0048974	03/03/2005
Wilbbern	US 2005/0032542	02/10/2005
Gutowski	US 6,411,819	06/25/2002
Masuda et al.	US 2004/0166858	08/26/2004

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2688

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGelin
March 15, 2006

JEAN GELIN
PRIMARY EXAMINER

Jean Allard Gelin